

LA-UR 99-4220

Approved for public release; distribution is unlimited

## TRANSIMS Distribution

Paula Stretz

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# **TRANSIMS Distribution**

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*Paula Stretz*

*Software Team Leader*

*Los Alamos National Laboratory*

# Purpose

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- *Demonstrate use of the TRANSIMS framework and components*
  - *Population synthesis, activity generation, route planning, traffic microsimulation, emissions estimates, visualization*
- *Provide source code for evaluation*
- *Provide documentation of the components and their use.*

# What's on the CD

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- *License Agreement*
- *Installation Instructions*
- *Installation Script - install.sh*
- *TRANSIMS Distribution - transims.tar*

# License

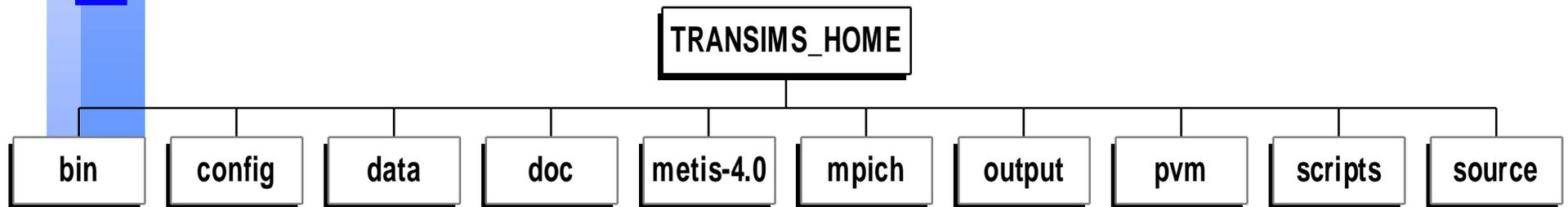
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- *Evaluation Only*
  - *nonexclusive*
  - *nontransferable*
  - *noncommercial*
- *Limited Term*
  - *expires November 1, 1999*

# TRANSIMS Distribution

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## TRANSIMS Directory Structure

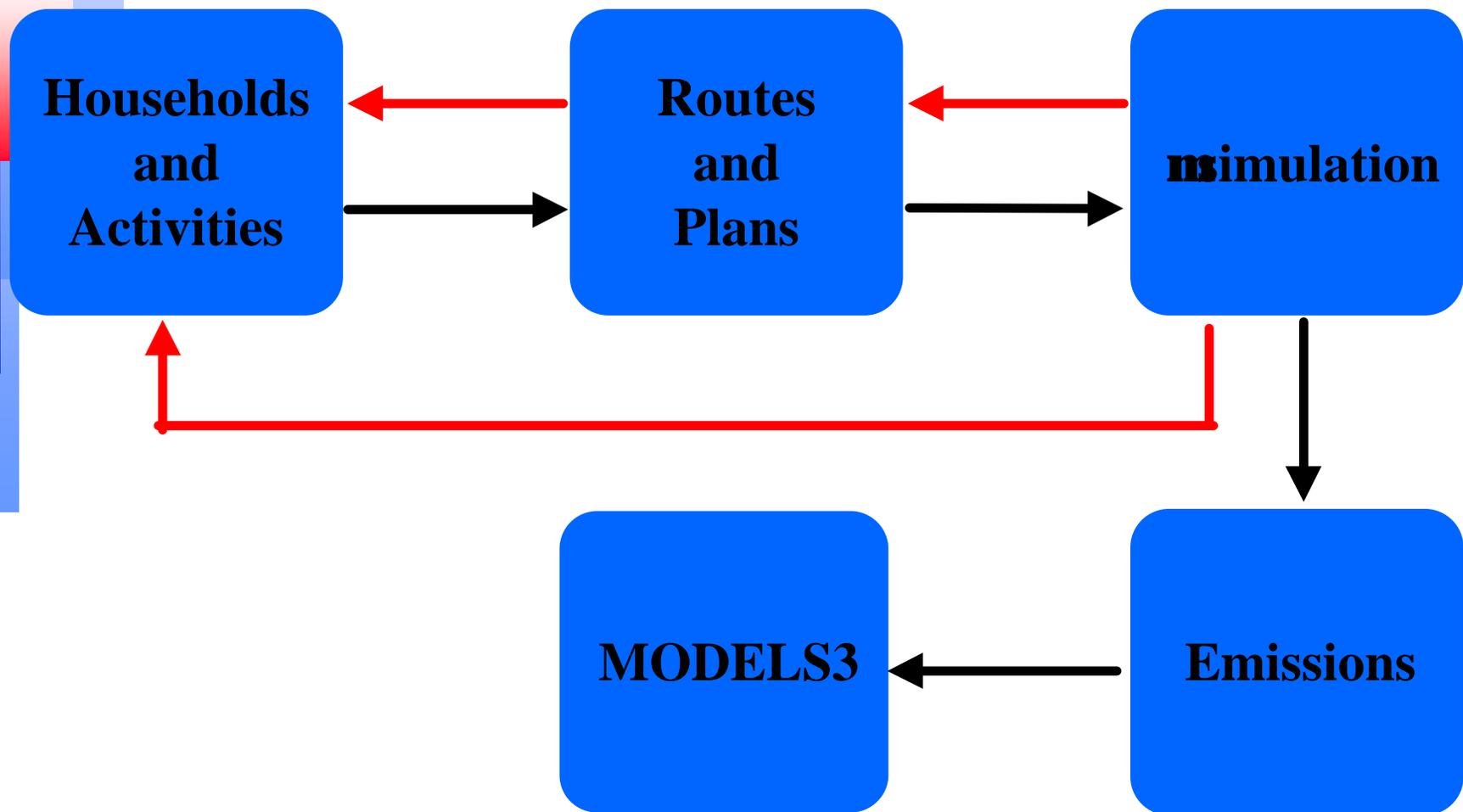


# Software Components

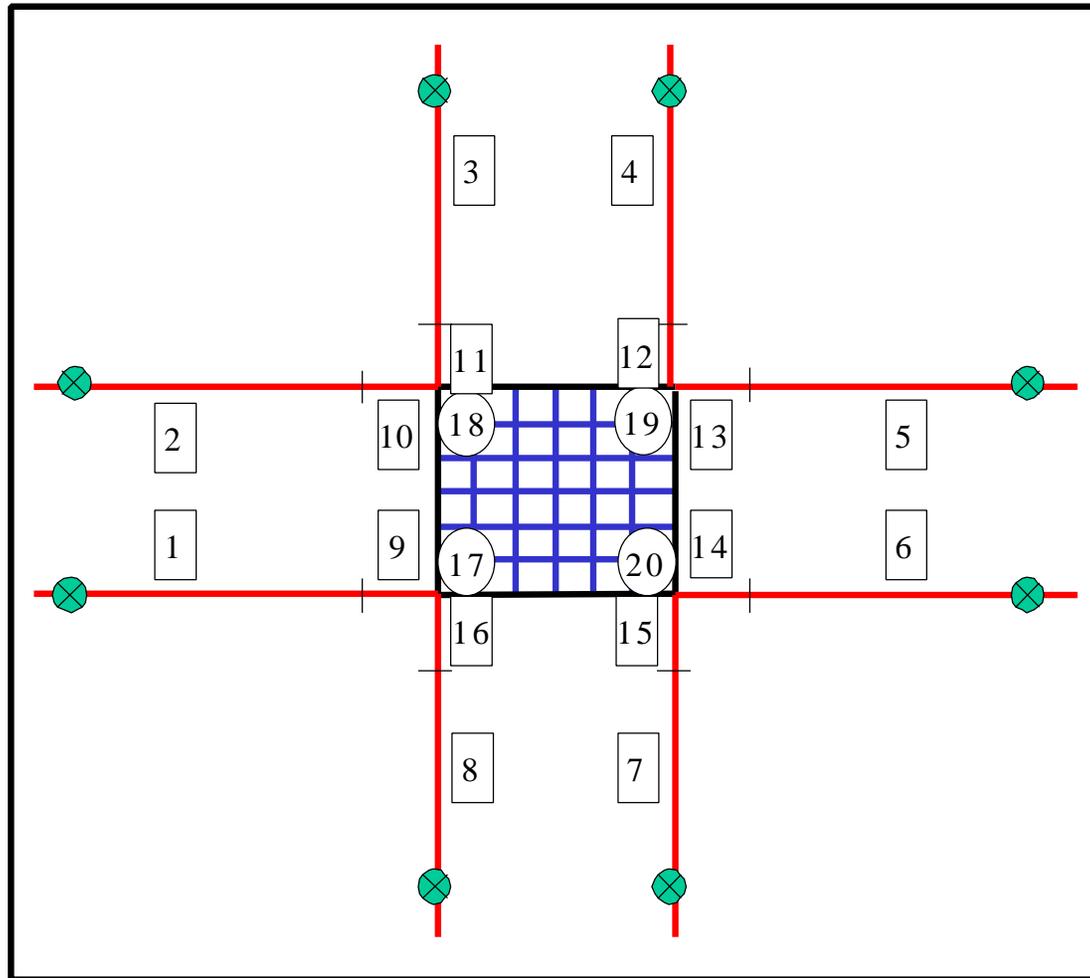
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- *Framework*
- *Synthetic Population Generator*
- *Activity Generator*
- *Multimodal Route Planner*
- *Traffic Microsimulation*
- *Feedback Selector*
- *Emissions Estimator*
- *Visualizer*

# TRANSIMS Components

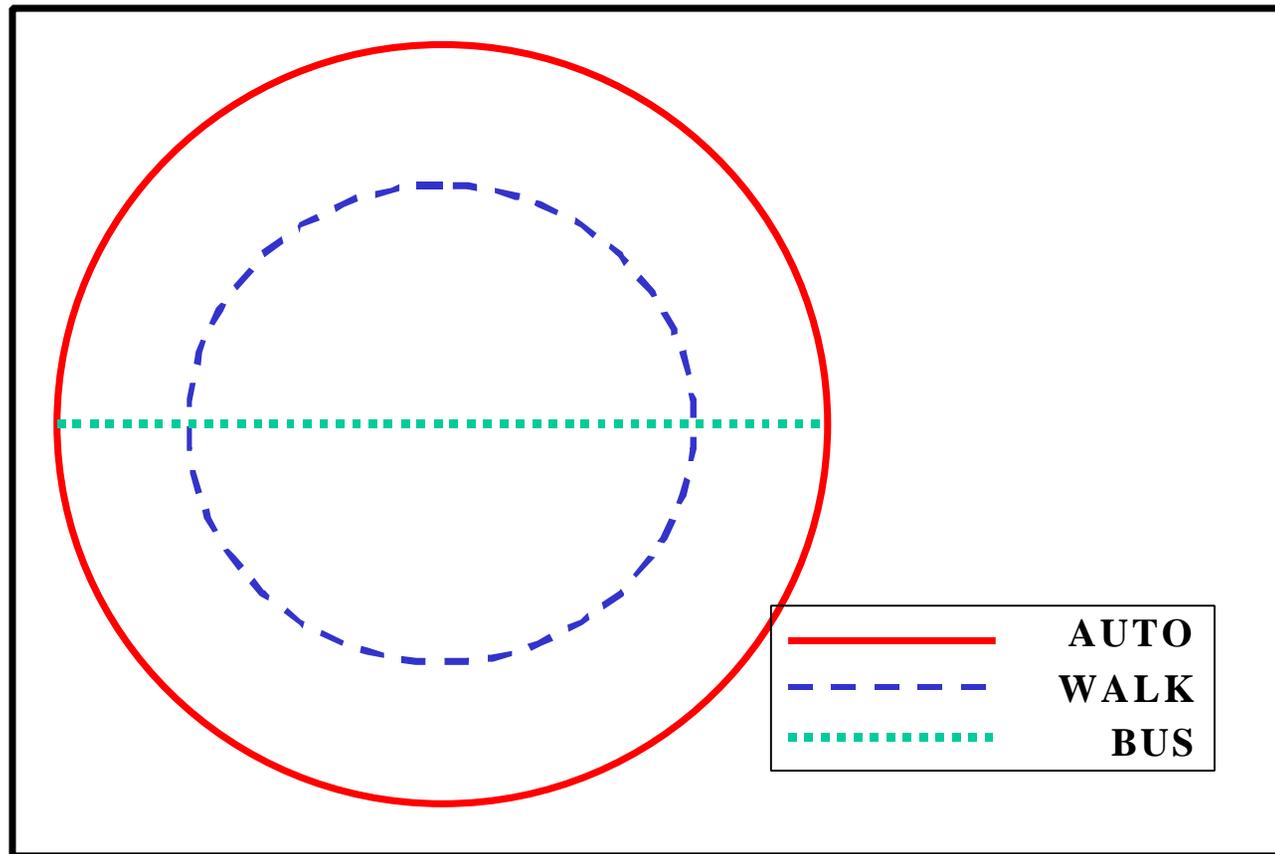


# Local Streets Network

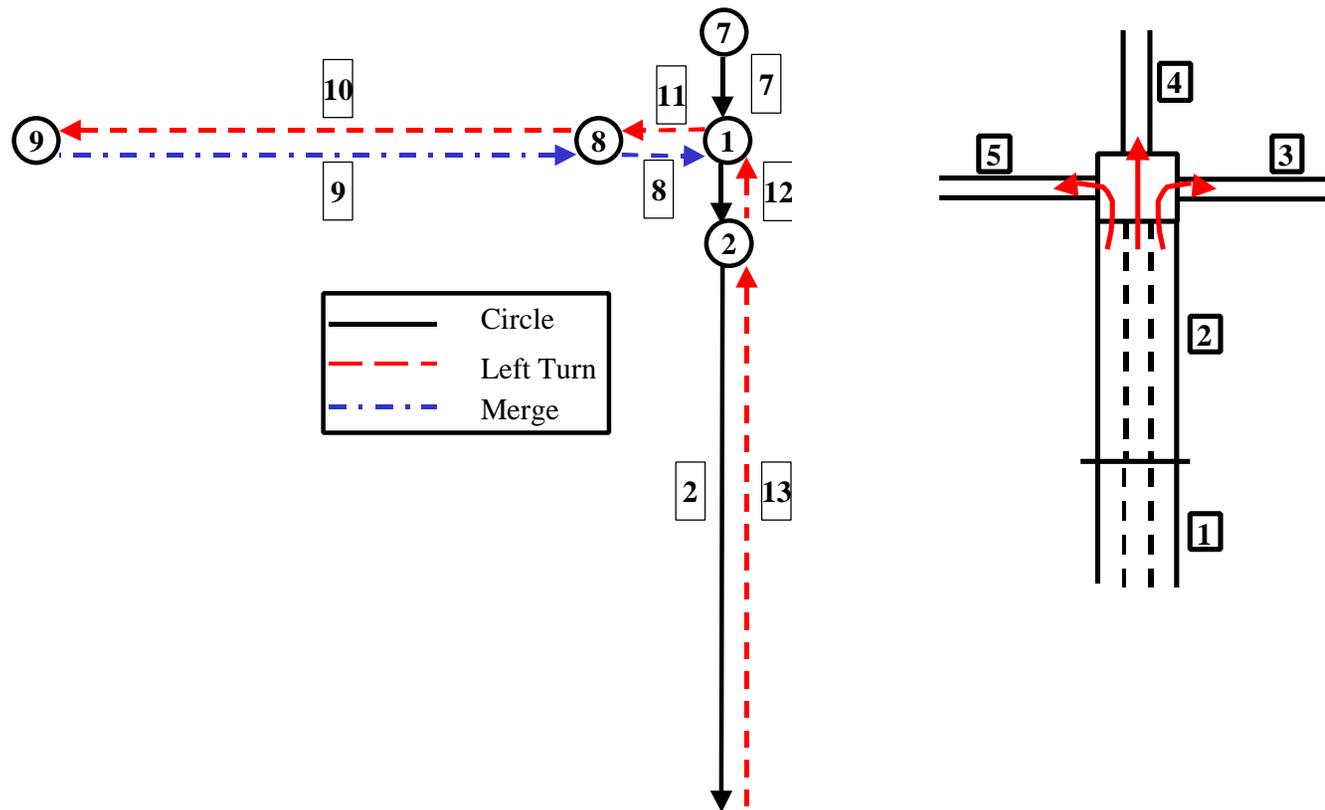


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# Multi-mode Network



# Circle and Tee Networks



# Documents in This Release

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- *Volume 0 - Overview*
- *Volume 2 - Software*
  - *Modules, Selectors, Test Networks, Libraries*
- *Volume 3 - Files*
- *Volume 4 - Case Studies*
- *Volume 6 - Installation Guide*

# Software

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- *X-Windows, X11R6*
- *OpenGL - Mesa/GL*
- *GLUT*
- *Perl*
- *Parallel Virtual Machine (PVM),  
Message Passing Interface (MPI),  
metis, and Xforms are supplied with the  
TRANSIMS distribution*

# Operating System

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## ■ *Linux*

- *Red Hat Linux, Version 5.2 or higher*
- *Other versions not tested at LANL*

## ■ *Networking must be configured with IP address and host name.*

# Hardware Requirements

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- *Depend on size of problem domain.*
  - *networks -- number of links/nodes*
  - *travelers -- number of travelers*
- *Multiple machine configurations possible*
- *Disk requirements expand with output collection specifications/volume*

# Hardware Configurations

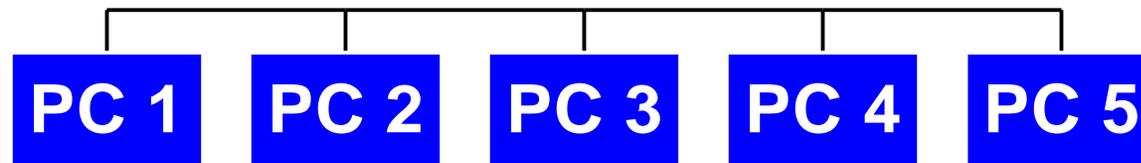
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- *Single Machine*
  - *Small scenarios*
  - *Unable to leverage parallel computing*
- *Network Single CPU Machines*
  - *Moderate Scenarios*
  - *Limited by network bandwidth*
- *Multiprocessor Machine*
  - *Useful for a range of scenarios*
  - *#CPUs must expand with size of scenario*

# Sample Configuration - Networked Single Machines

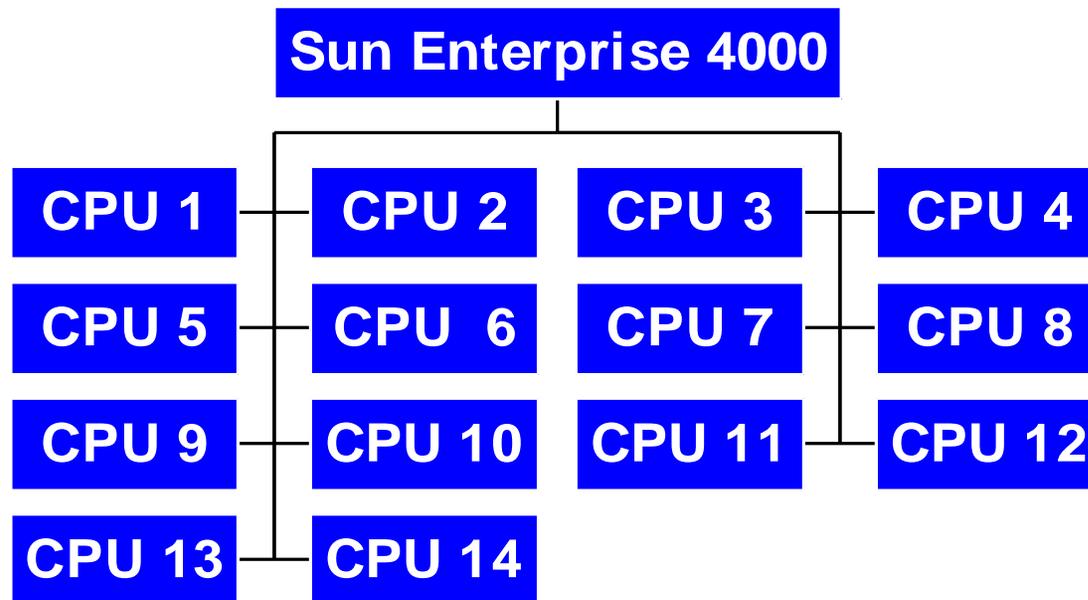
- *5 PCs running Linux on ethernet LAN*
- *Memory -- 250 megabytes/machine*
- *Disk -- 4 gigabytes*

## Networked Machines



# Sample Configuration - Multiprocessor Machine

- *Sun Enterprise 4000 running Solaris*
- *14 CPUs*
- *Memory -- 4+ gigabytes*
- *Disk -- 20+ gigabytes*



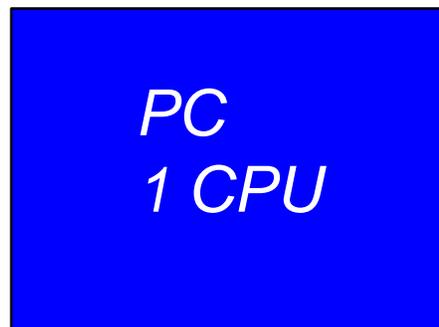
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# Sample Configuration - Single Machine

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- *PC (Pentium) running Linux OS*
- *Memory -- 128 megabytes*
- *Disk -- 4 gigabytes*

*Single Machine*



# Hardware Requirements

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- *PC with Pentium II processor 400 MHz or higher*
- *Memory - 128 megabytes or higher*
- *Disk - 4 gigabytes*
- *Graphics boards supported by OpenGL on Linux for TRANSIMS Visualizer.*

# Summary

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- *CD contains*
  - *TRANSIMS components*
  - *Small data sets and sample data*
  - *Source code for evaluation*
  - *Documents*
- *Evaluation license required.*
- *CD's will be distributed this afternoon.*